

Armchair Guide to the America's Cup

A new course is set

THE America's Cup is the most demanding yacht race in the world. This time it is even more difficult because it is being staged in a new location, with different conditions, and a modified course that creates more close quarters manoeuvring. See map pages 22-23.

Armchair yachtsmen will soon appreciate these course changes, which put more pressure on yachts and crews, and make it harder to break away.

The traditional 24.3 nautical mile course used at Newport, Rhode Island, had 4.5 nautical mile legs. To increase the competitive aspect of the America's Cup, the Royal Perth Yacht Club has shortened these legs to 3.25 nautical miles, creating more mark roundings. This makes a tougher test for yachts and crews, and provides more close-quarters action at the buoys for spectators.

This course really tests the manoeuvrability of the modern 12 metre yachts. It also puts greater emphasis on precision crew work, which is essential to shave those vital seconds in tacks, gybes, sail trimming and spinnaker work.

One advantage Perth has over Newport is excellent summer visibility. Low lying cloud and fogs are unknown in summer. This means viewing conditions for the spectator fleet and for those at home around the world watching television, will be unparalleled in the history of the event.

In the prevailing south west winds, racing will concentrate on an area about 5 km off the coast. In easterly conditions, racing will extend towards the mainland.

The weather conditions in Perth are ideal for the America's Cup. A Perth summer is sunny and hot, with over 90 per cent of summer breezes coming from the south west. Wind strength over the course area during the America's Cup Match is forecast at 16 to 20 knots.

Spectators will appreciate that neither side of the America's Cup course will be favoured in normal sea breeze conditions - a big change from the fluke conditions experienced on Rhode Island Sound.

In Frer, antle, it shouldn't matter which tack is favoured at the start in a south west breeze, because wind shifts should be constant over a wide racing area.

This makes the Fremantle course ideal for competitive 12 metre racing. Foreign challengers and Australian defenders alike are pleased with the way the course and conditions have opened up a new era of design possibilities.

Around the America's Cup course

THE strategy of yacht racing is to find the quickest path around the America's Cup course. Each skipper tacks and gybes his yacht to pick up favourable wind shifts that increase boat speed through the water.

This constant changing of direction is an essential strategy to create opportunities to get ahead.

On Legs 1, 3, 6 and 8 of the America's Cup course, this manoeuvring is called **tacking** - when the bow of the yacht swings through the eye of the wind as it changes direction. On these Legs, the yachts are going to the Windward Mark.

On Legs 2, 4, 5 and 7 it is called **gybing** - when the yacht changes direction with the wind coming from the side or behind. On these Legs the yachts are going to the Leeward and Wing Marks.

The following is a quick guided tour around the course.

1st LEG - To the Windward Mark. The pin end of Start Line (America's Cup Buoy) is laid at right angles to the wind. In other words, from the Start to the first mark, the yachts have to sail right into the wind. This is known as a **beat** to Windward.

2nd LEG - Back to Start Line Marker (America's Cup Buoy).

Having tacked round the Windward Mark, the yachts come back **running** downwind, flying colourful spinnakers, constantly gybing to the left and right. They return to the Leeward Mark (America's Cup Buoy).

3rd LEG - To the Windward Mark.

After gybing around the Leeward Mark they begin the second **beat** into the wind to the same Windward Mark as on the first leg.

4th LEG - To the Wing Mark. After tacking around the Windward



Mark, the yachts go on a **reach**, with the wind to the side, to the Wing Mark.

5th LEG - To the Start Line Marker (America's Cup Buoy).

They gybe around the Wing Mark and head on a **reach**, with the wind from the side, to the America's Cup Buoy for the second time.

6th LEG - To the Windward Mark. Gybe around the Start Line Marker and go on a third **beat** to the Windward Mark.

7th LEG - To the Start Line Marker. Tack around the Windward Mark and head back on a **run** downwind for the last time to the Start Line Marker (America's Cup Buoy).

8th LEG - To the Finish. Gybe around the Start Line Marker and go on the last **beat** to the Finish, which is located at right angles to the wind. That now familiar Windward Mark is one end of the Finish Line.

The dates

Defender Selection Trials

Series A	- October	18-29
Series B	- November	10-23
Series C	- December	5-19
Series D	- December 29 - January 10	
Final	- January	16-26

Challenger Elimination Series

Preliminary Series - October	5-20
1st Round Robin - November	2-19
2nd Round Robin - December	2-19
Semi Finals - December 28-January 7	
Final - January	13-23

America's Cup Match

Best of 7 Races - January 31, 1987

Yachting terms - what they all mean

THE America's Cup is the ultimate yacht race. It has captured the imagination of people who like watching nations, yachts and individuals tussle in a race every competitor has a realistic chance of winning.

The amazing thing about the America's Cup is that it is followed worldwide by millions of people who know very little about sailing.

Your **Armchair Guide** to yachting language will make this great spectacle easy to follow and very enjoyable. We hope the Guide lets you become an armchair expert.

Glossary

Abeam: Anything abeam is straight out from either side of the yacht.

Aft: At the rear.

Astern: Behind the yacht.

Backstay: Wire that runs from the top of the mast to a point on the stern. Used to tension the mast slightly backwards.

Bear away: Alter course away from wind.

Bearing: Direction the yacht is going.

Blanketing: Sailing between your opponent and the wind, giving him "dirty air" from your sails.

Boom: Aluminium or kevlar spar attached to the foot or bottom edge of the mainsail.

Bow: Front section of the yacht.

Brace: Rope or wire that controls the angle of the spinnaker pole to the wind.

Broad reach: Sailing with the wind coming from the side.

By The Lee: Sailing downwind (wind behind) at an angle where the sails could be set on either side of the yacht. It means sailing in a position beyond the present tack without gybing.

Coaming: Edge of the yacht where hull and deck join.

Clew: Corner of the sail on which the sheets (ropes) are tied.

Close hauled: Sailing as close as possible to the direction of the wind.

Coffee Grinder: The big winch with pedal type handles.

Come about: Bring the bow across the eye of the wind until the sails fill on the other side. Also known as tacking.

Come up: To point the bow of the yacht "up" towards the direction of the wind.

Going "up" is into the wind. Going "down" is away from the wind.

Covering: Getting in front and staying between your opponent and the eye of the wind, creating a wind shadow. No matter which way he tacks, you go with him. He cannot sail past you through this wind shadow.

Crane: The mast crane is the alloy arm at the top of the mast holding up the wire mainsail halyard and the wire backstay.

Cross-trees: Supports on the mast to keep the wire rigging steady.

Dead square: Sailing with wind right behind, with the mainsail out to one side.

Dirty air: Disturbed air from the leading yacht hitting the sails of the following yacht. Causes dramatic loss of speed.

Downhill: Sailing with the spinnaker up and the wind behind.

Downwind: Same direction as downhill. Away from the wind.

Ease sheets: Slacken off the ropes that adjust the sails.

Falling Off: Heading slightly away from the wind to pick up speed for tactical reasons.

Foot: The bottom edge of a sail.

Footing: Sailing slightly below the optimum angle of the wind.

Foredeck: Section of deck between mast and bow.

Forestay: Tensioning wire running from bow to masthead.

Genoa: Large front sail that overlaps the mainsail.

Gooseneck: Fitting attaching mainsail boom to mast.

Grind: Winding the handles to operate the huge winches.

Grinder: The big winch operators, commonly called "gorillas" because of the strength needed in this position.

Gybe: Changing direction when the wind is behind. The sails swing from one side of yacht to the other.

Halyard: Wire or rope used to hoist sail up the mast.

Harden up: Pull the sails tighter and wind opponent and the sails swing from one side to the other.

Header or knock: Wind shift that enables yacht to tack to a slightly better line for the next mark.

Heeling: Way in which yacht leans to one side in the wind.

Helm: The steering wheel, or tiller.

Job: The triangular headsail that provides acceleration power.

Lay line: Imaginary straight line a yacht follows to each mark.

Leech: The trailing edge of a sail.

Lee-bow: To tack into a position slightly ahead and slightly to leeward of your opponent. An advantageous but risky manoeuvre.

Leeward: Side away from the wind.

Luff: The leading edge of sails. The luff flaps when the bow goes too close to the wind direction.

Luffing: When the sail flaps because the yacht is too close to the wind.

Mainsail: The rear sail that is attached to track up the mast and to the mainsail boom.

Mainsheet: Rope that controls the masthead.

Masthead: Top of the mast.

Over-ride: When the turns of rope around a winch run one over another. With several tonnes of pressure on the winch, an over-ride is a big problem, jamming the sail position.

Pinching: Sailing slightly above the optimum angle on the wind.

Pointing: Aiming the bow as far as possible into the wind.

Pole: Also called the spinnaker boom. A pole attached to the mast and spinnaker, to hold the spinnaker at the correct angle to the wind.

Port: Left side.

Port tack: When the wind comes from the left, with sails leaning to the right.

Reaching: When the sails are eased, with the wind coming from one side.

Running: Sailing with the wind behind.

Sheets: Ropes that tighten and loosen the sails.

Shooting: Tricky tactic when you can't quite make a mark. Means temporarily heading the yacht into the v-ind and luffing (sails flapping) above your course, and then relying on the boat's momentum to 'shoot' around a mark. This avoids making a short tack at mark, but must be done skilfully, as the yacht rapidly loses speed.

Shrouds: Wires on each side of the yacht holding the mast up.

Spinnaker: Big, full sail that billows out the front when the wind is from behind.

Spreaders: Supports on the mast to keep the wire supports steady. Also known as cross-trees.

Starboard tack: When the wind is coming from the right, with the yacht and sails leaning to the left.

Stays: Wires running from top of mast to bow (forestay) and top of mast to stern (backstay). They prevent the mast falling forward or backwards. The backstay also controls the degree of bend in the mast.

Stern: Rear end.

Tack: Front bottom corner of a sail.

Tacking: When the yacht swings through the wind's eye and the sails swing from one side to the other.

Tactician: He works out the Match Racing tactics and constantly advises skipper what is happening.

Tail: Rope attached to the end of a wire halyard.

Tailing: To tack tighter on a sheet (rope) would be a wind.

Tender: Fast powerboat carrying syndicate managers, advisers, computers and some spare parts.

Transom: Stern section of the yacht.

Turtle: Special sail bag with zipper or flaps from which sails can be speedily hoisted.

Under way: The yacht is moving forward.

Upwind: Sailing towards the wind.

Vang (Boom vang): Wire pulley system to hold the mainsail boom. Stops it angling up away from the deck.

Weather helm: When each gust tends to push the yacht up into the wind.

Weather mark: The mark to windward of the starting line. Must go into the wind to get there.

Weather side: Side of the yacht towards the wind.

Winches: Mechanical drums that tighten sheets and halyards.

Wind shadow: When the following yacht runs into disturbed air from the leader's sails.

Wineglass: A bad twist in the centre of the spinnaker. The resulting shape is like a wine glass.

Wing mark: The widest mark on the course after the first reach. The mark is out wide, like a wing.

Windward: Side from which wind is blowing.

Wrap: When the spinnaker is twisted around the forestay.

The sails

MAINSAIL. Chosen prior to the start and not changed during a race. For the purpose of **Arnie's America's Cup Challenge Computer Game** only one *All Purpose* Mainsail is used.

LIGHT GENOA. Lightweight sail specifically built for light winds only. Use of this sail outside of its wind range will result in damaged or split sail and will lose the yacht a lot of ground as an *Emergency Genoa* change will be necessary.

If changed voluntarily because of increasing wind, only a very small loss will occur. One to 3 boat lengths. One in very light winds, out to 3 in very heavy conditions.

MEDIUM GENOA. Full size sail built to withstand higher loads while the yacht is still able to carry full size sails.

Using this sail in less wind than recommended will result in a slight speed loss. A change to the lighter Genoa when the wind decreases to the correct range will return boat speed.

Use of this sail beyond the suggested wind range causes the yacht to heel excessively, reducing speed and causing leeway (sliding sideways). A change to the Heavy Genoa at this stage will return boat speed.

HEAVY GENOA. Used when the wind is too strong for the other Genoas. This sail will not break in the maximum wind the yacht will be asked to race in.

Used in wind that is lighter than recommended will result in significant loss of boat speed. A change to a lighter Genoa will return boat speed.

LIGHT SPINNAKER. This is as it's name implies a lightweight sail designed for use downwind at angles between 70°-180° in very light winds of zero to 12 knots. Damage will occur to this sail if carried beyond its wind range (particularly at the narrower wind angles, in the 70°-110° range).

Torn Sail (Spinnaker or Genoa). CAUSE: a) Used in wind range over the 20% safe load.

b) Tangled or fouled an opposing yacht during collision.

MEDIUM SPINNAKER. Used in the higher wind strengths.

When carried at narrow wind angles in the stronger winds (under 100°) loss of control, excessive heel and reduced speed along with a damaged sail will result.

HEAVY SPINNAKER. Specialist sail, very strong. Built smaller and flatter to carry effectively at narrow angles downwind 70°-110°. It's weight means that it is not efficient in the 0-6 knot range and a speed loss will occur if this happens. The smaller size means a speed loss at greater angles than 110°, although this loss is small.

NOTE: Recommended wind ranges for sails have a "safety factor" built in of 20%. Slight loss of speed will occur up to this point, beyond which the sail will break.

ARNIE SUGGESTS. Sail Selection should be given careful consideration prior to the start of each race. Wind strength as announced by the Commodore will be the primary element of your decision.

Each sail may be used for a short time slightly over its wind range with only a small penalty. This is to enable the decision to either change to the next sail or gamble on the wind strength lessening again. A sail change manoeuvre requires a very slight loss of distance, hence the need to gamble sometimes and hang onto the sail being used. e.g. Towards the end of a leg of the course, or during a tactical move.

SOLUTION: Untangle or cut sheet and replace it.

EFFECT: Speed halved until repair completed (usually within 10 boat lengths). Yacht cannot manoeuvre or trim sails while the sheet is jammed.

Spinnaker 'Bad Set' CAUSE: Too slow hoisting or tangles when hoisting too early.

SOLUTION: Turn smoothly at buoy and hoist when half the yacht is past the mark.

EFFECT: Slow hoist lose 30% of boat speed, tangle spinnaker lose 40% of boat speed until cleared (usually within one minute).

Spinnaker 'Bad Gybe' CAUSE: Skipper turns too slowly and sails extra distance, or too quickly leaving the crew insufficient time to reset the sails for the new course.

SOLUTION: Change in replacement sail. i.e.: nearest alternative from remaining sails.

EFFECT: Speed halved until replacement is completed. Slight loss of speed may be continuing if replacement is not correct for the particular wind.

Broken Halyard on Mainsail or Genoa. CAUSE: Carrying too much sail in a strong wind.

SOLUTION: Repair or replace the halyard.

EFFECT: Speed halved until sail that fell down has been rehoisted.

NETT LOSS: Genoa - 6 lengths, Mainsail - 30 lengths.

Crew failures

In order of most common occurrence.

Sheet 'overwind' CAUSE: Sheets are wound around the winches with several turns, one of which snags causing the rope to lock on to the solution.

SOLUTION: Untangle or cut sheet and replace it.

EFFECT: Speed halved until repair completed (usually within 10 boat lengths). Yacht cannot manoeuvre or trim sails while the sheet is jammed.

Spinnaker 'Bad Set' CAUSE: Too slow hoisting or tangles when hoisting too early.

SOLUTION: Turn smoothly at buoy and hoist when half the yacht is past the mark.

EFFECT: Slow hoist lose 30% of boat speed, tangle spinnaker lose 40% of boat speed until cleared (usually within one minute).

Spinnaker 'Bad Gybe' CAUSE: Skipper turns too slowly and sails extra distance, or too quickly leaving the crew insufficient time to reset the sails for the new course.

SOLUTION: Turn the yacht in a nice smooth arc so that you pass close to the buoy sailing straight downwind for a couple of lengths prior to assuming the new course.

EFFECT: Nett Loss - extra distance sailed for wide turn, or 2 boat lengths for a rapid turn causing the spinnaker to collapse temporarily.

Spinnaker 'Bad drop' CAUSE: Too late or too early with the takedown.

SOLUTION: Accurately gauge time required for a smooth efficient takedown, dependent on the wind strength.

Optimum distance from buoy: strong wind - 7 lengths, medium wind - 5 lengths, light wind - 3 lengths.

EFFECT: Late takedown nett loss 4 lengths. Early takedown slight loss only, increasing with distance or amount too early.

Man 'Overboard' CAUSE: Most likely during Spinnaker manoeuvres which are rushed because of the closeness of the other yacht.

SOLUTION: Do not make snap manoeuvres or decisions that unreasonably pressure your crew.

EFFECT: Nett loss 20 lengths. Apart from saving your mates, the rules require you to finish with all of your crew onboard.

Weather conditions

Light Winds 0-12 knots. Easterly.

Water flat, wind gust shadows/cats paws very obvious on water surface.

Greatest variation in wind direction in these conditions. Maintaining boat speed vital as any loss of speed will take a long time to build up again.

Yacht should be sailed at wider wind angles when "on-the-wind" 80°-90°. 80° at about 8 knots, out to 90° as the wind lightens towards 2 knots.

Long term tactical decisions more critical, as frequent manoeuvring will reduce boat speed.

Light Moderate Wind 10-20 knots. South east - South west.

Water has small wind waves, wind on the water. Gusts or increases in wind speed still fairly clear although not as distinct 'Cats Paws', more as a line of approaching shadow.

Maintaining boat speed less of a battle, more manoeuvring possible.

Yacht can be sailed at optimum angles on-the-wind 70°-80°. 70° at 10-18 knots increasing to 80° as wind goes down in strength. Closer tactical racing possible, keeping in mind that a fairly large increase/decrease in wind speed and direction is still possible and if detected will mean a big gain or loss if handled correctly/incorrectly.

Moderate-Fresh Winds. 18-30 knots. South westerly (Fremantle Doctor).

Large choppy wind waves. Wind direction very steady. Usual variation only 5-8 degrees either side of the mean or average wind.

Gusts or increases in wind are sudden and fairly heavy as it is a cold heavy wind. The rough water makes gusts or direction change hard to predict. Response is usually to temporarily sail at a closer angle to the wind (feathering) inside 70°.

(without loss of speed). As the gust eases the yacht should be sailed at 70° or slightly more for best drive. Prolonged 'feathering' will slow the yacht.

Tactics are paramount as both yachts will have much closer boat speed.

Wind shifts

Wind does not blow from a constant direction.

There are three basic categories - *Oscillating, Persistent* and combined *Oscillating Persistent*.

The majority of races off Fremantle are sailed in *Oscillating* winds of 12 to 25 knots, however there is a tendency in the lighter easterly winds for the winds to be *Persistent*.

Oscillating Winds Change direction right then left around an average/mean direction. i.e.: Mean wind at 210°, varies to the left by 10° to 200°, then back to the mean at 210° and on to the right by 10° to 220°.

These oscillations are fairly even and predictable to a large degree on any given day. Time span and amount of variance will change as the wind strength alters.

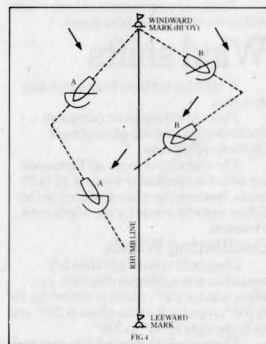
In a fresh/strong wind there is less tendency for the wind to wander or oscillate. As it lightens it wanders about more. A typical 'Fremantle Doctor' will oscillate as little as 5° off the mean direction with a total time span of up to 10 minutes. A land breeze or 'Easterly' that is 'light' at around 5 knots may oscillate by as much as 15° or 20° either side of the mean/average over a time span of 3 to 5 minutes.

Persistent Shifts A wind direction that continues to slowly change either to the right or the left e.g

Sailing ... what to do (cont.)

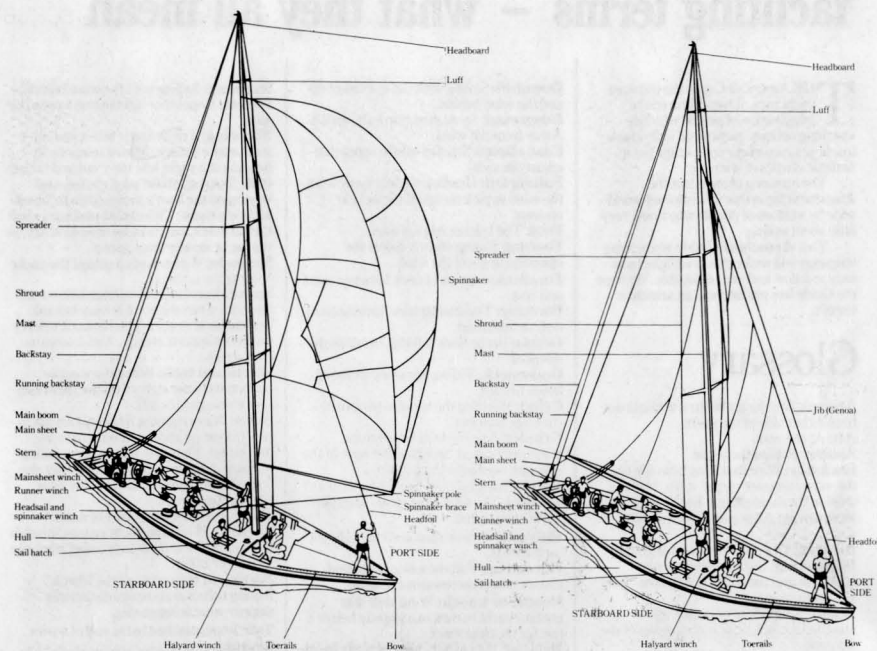
The fact that the wind oscillates will mean that there is a definite need to be on the correct 'tack' to take the yacht closer to the mark at a tighter angle to the wind. The 'Golden Rule' is the opposite to that when on the wind. Downwind we *Gybe* on the lifts. (Refer Figure 4.)

It can clearly be seen that to sail the same angle to the wind on the opposite Gybe, yacht B had to travel at more acute angles to the actual 'Rhumb Line', or straight line course to the mark, and in consequence will sail a greater distance to reach the buoy. e.g.: Final race September 1983 America's Cup - *Australia II* defeats *Liberty*.



Obstacles

Spectator craft would be the only obstacle likely on an America's Cup course. The wash from these craft could also be detrimental to boat speed, particularly as the yachts progress up the 'windward' leg and out to one side a lot. Near the finish the wash and 'blanketing effect' could also be significant. (*Australia II*/Liberty 1983)



Your personal record to the 1987 America's Cup Match The Triumph of

RACE ONE		RACE FOUR		RACE SEVEN	
DAY:	DATE:	DAY:	DATE:	DAY:	DATE:
OFFICIAL START TIME:		OFFICIAL START TIME:		OFFICIAL START TIME:	
AROUND THE COURSE		AROUND THE COURSE		AROUND THE COURSE	
START WON BY:	LEAD:	START WON BY:	LEAD:	START WON BY:	LEAD:
1ST MARK:	LEAD:	1ST MARK:	LEAD:	1ST MARK:	LEAD:
2ND MARK:	LEAD:	2ND MARK:	LEAD:	2ND MARK:	LEAD:
3RD MARK:	LEAD:	3RD MARK:	LEAD:	3RD MARK:	LEAD:
4TH MARK:	LEAD:	4TH MARK:	LEAD:	4TH MARK:	LEAD:
5TH MARK:	LEAD:	5TH MARK:	LEAD:	5TH MARK:	LEAD:
6TH MARK:	LEAD:	6TH MARK:	LEAD:	6TH MARK:	LEAD:
7TH MARK:	LEAD:	7TH MARK:	LEAD:	7TH MARK:	LEAD:
FINISH:	LEAD:	FINISH:	LEAD:	FINISH:	LEAD:
WIND DIRECTION AT THE START:	SPEED:	WIND DIRECTION AT THE START:	SPEED:	WIND DIRECTION AT THE START:	SPEED:
AT THE FINISH:	SPEED:	AT THE FINISH:	SPEED:	AT THE FINISH:	SPEED:
REMARKS:		REMARKS:		REMARKS:	

RACE TWO		RACE FIVE		THE RESULT	
DAY:	DATE:	DAY:	DATE:		
OFFICIAL START TIME:		OFFICIAL START TIME:			
AROUND THE COURSE		AROUND THE COURSE			
START WON BY:	LEAD:	START WON BY:	LEAD:		
1ST MARK:	LEAD:	1ST MARK:	LEAD:		
2ND MARK:	LEAD:	2ND MARK:	LEAD:		
3RD MARK:	LEAD:	3RD MARK:	LEAD:		
4TH MARK:	LEAD:	4TH MARK:	LEAD:		
5TH MARK:	LEAD:	5TH MARK:	LEAD:		
6TH MARK:	LEAD:	6TH MARK:	LEAD:		
7TH MARK:	LEAD:	7TH MARK:	LEAD:		
FINISH:	LEAD:	FINISH:	LEAD:		
WIND DIRECTION AT THE START:	SPEED:	WIND DIRECTION AT THE START:	SPEED:		
AT THE FINISH:	SPEED:	AT THE FINISH:	SPEED:		
REMARKS:		REMARKS:			

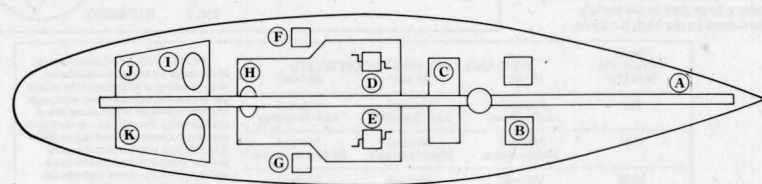
RACE THREE		RACE SIX	
DAY:	DATE:	DAY:	DATE:
OFFICIAL START TIME:		OFFICIAL START TIME:	
AROUND THE COURSE		AROUND THE COURSE	
START WON BY:	LEAD:	START WON BY:	LEAD:
1ST MARK:	LEAD:	1ST MARK:	LEAD:
2ND MARK:	LEAD:	2ND MARK:	LEAD:
3RD MARK:	LEAD:	3RD MARK:	LEAD:
4TH MARK:	LEAD:	4TH MARK:	LEAD:
5TH MARK:	LEAD:	5TH MARK:	LEAD:
6TH MARK:	LEAD:	6TH MARK:	LEAD:
7TH MARK:	LEAD:	7TH MARK:	LEAD:
FINISH:	LEAD:	FINISH:	LEAD:
WIND DIRECTION AT THE START:	SPEED:	WIND DIRECTION AT THE START:	SPEED:
AT THE FINISH:	SPEED:	AT THE FINISH:	SPEED:
REMARKS:		REMARKS:	



The America's Cup course is over 24.1 nautical miles. Each leg is 3.25 nautical miles. Weather records show that over 90% of the summer afternoon breezes blow from a south westerly direction.

12 metre yacht deck features, riggings and crew positions

A Bowman D/E Grinders I Navigator
B Mast man F/G Trimmers J Tactician
C Hoist man H Mainsail trimmer K Skipper/Helmsman



Arnie's America's Cup Challenge

The Game

Success in sailing is founded on a 'feel' for the sea, teamwork, practice and good judgement. Some say luck too, but we think not. We have included all these elements as the essence of success at playing this game.

We hope you have the 'feel for the sea' some would call luck. Teamwork we translate into joystick skill. Pages of the **ARMCHAIR GUIDE TO THE AMERICA'S CUP** describes a typical 12 metre yacht and its crew. Your joystick becomes your crew. The better a crew works together the better the yacht sails and so, the better you refine your joystick skills the better you and your crew will sail. Practice makes perfect. Good judgement is the challenge that makes people keep striving. Success in 12 metre yachting, and in this game, results from repeated good judgement, learning from one's mistakes and excellent teamwork.

In the **ARMCHAIR GUIDE TO THE AMERICA'S CUP** we describe the factors affecting the sailing performance (Pages 1 and here we describe how you convert your skipper's decisions through your joystick into action.

The **OFFICIAL AMERICA'S CUP COMPUTER GAME** is a realistic graphic recreation of 12 metre yachts sailing and what will need to be done to win the America's Cup. It is immensely realistic in appearance, strategy and player skill. You'll really feel like you're out there pitting wits with the best 12 metre yachtsmen. The rules and regulations are those applied to the America's Cup. The **ARMCHAIR GUIDE TO THE AMERICA'S CUP** specifically details from pages all you will need to know about 12 metre yachts and America's Cup Match racing. The better you apply the theory detailed there the better you'll play the game.

Play of the Game

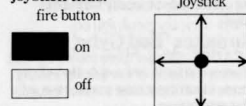
You will load the game into your computer as advised in the supplied instructions, with the initial selections made via the Keyboard.

When the game is loaded, you will select either:
• **SINGLE PLAYER** - You're the Challenger, the Computer is the Defender.
• **TWO PLAYERS** - Players to decide their choice and identify as either the Challenger or Defender.
• **LEVEL OF PLAY** - Your choice of **AMATEUR**, **CLUB RACE** or **AMERICA'S CUP**.

The **COMMODORE** will then announce the **RACE WEATHER CONDITIONS**. **PRESS THE SPACE BAR** and you will be asked to **CHOOSE YOUR STARTING SAILS**.

If you're careful, your opponent will not be aware of your choice until the race starts.

SAIL SELECTION is made using the joystick thus:



TO CHOOSE GENOA or SPINNAKER

- push joystick down then:
2. press fire button: once for light sail, twice for medium sail, three times for heavy sail
- return the joystick to the centre and press the fire button once.
- the screen will identify this is **DONE** in the top right or left hand corner.

Play begins with the **PRE-RACE MANOEUVRES**, the **START** and the **RACE OVER THE FULL EIGHT (8) LEGS** of the course as detailed in the **ARMCHAIR GUIDE TO THE AMERICA'S CUP**, page 1, and in the game's 'demonstration' mode.

N.B.: If no selections are made, the game will automatically switch to 'demonstration' mode and stay there until a key is pressed. See supplied instructions.

Control of your yacht is by joystick only and you will be kept very busy, so a good quality, robust joystick is suggested.

Helmsman's Mode

In game play mode there are **THREE (3)** modes you can be in at any time:
1. **HELMSMAN'S MODE**
2. **SAILS SELECTION MODE**
3. **WINCHING MODE**

Helmsman's mode is the mode used to control the yacht's direction and is the default mode.

Joystick movement to the **RIGHT** or **LEFT** without pressing the fire button, steers the yacht in the **STARBOARD** or **PORT** direction respectively.

- RIGHT** - movement to **STARBOARD**
- LEFT** - movement to **PORT**

When in split-screen mode (the yachts are too far apart to appear on one screen) pressing the fire button in 'HELMSMAN'S' mode causes your view of the split-screen to display the 'mini-course' screen.

Sail Selection Mode

This mode is selected by pushing the joystick forward and pressing the fire button once.

Once in this mode, these selections produce the following results:
a) **JOYSTICK RIGHT** - 'BOOM' moves towards centre line
b) **JOYSTICK LEFT** - 'BOOM' moves out from centre line

The **'ANGLE OF THE BOOM TO THE WIND'** is critical to the speed of the yacht and with sail choice, represent the major options you have to affect your yacht's performance.

c) **JOYSTICK UP** - 'SELECTS SPINNAKER'

Then each press of the fire button selects one of the available choices:
once for light spinnaker, twice for medium spinnaker, three times for heavy spinnaker

d) **JOYSTICK DOWN** - 'SELECTS GENOA'

Then each press of the fire button selects one of the available choices:
once for light genoa, twice for medium genoa, three times for heavy genoa

e) pressing the fire button once with the joystick centred returns you to the **'HELMSMAN'S'** mode.

Winching Mode

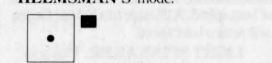
Once new sails have been selected 'WINCHING' mode is selected by moving the **JOYSTICK DOWN** and pressing the fire button **ONCE**.

You can then **WINCH SAIL UP** by rotating the joystick:
CLOCKWISE

WINCH SAIL DOWN by rotating the joystick:
ANTI-CLOCKWISE

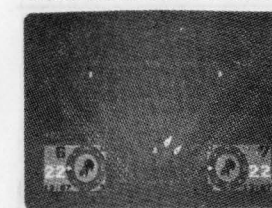
Winching skill is a combination of speed, judgement and consistent contact with all switches in the joystick. A smooth action produces best results.

Pressing the fire button once with the joystick centred returns you to the **'HELMSMAN'S'** mode.



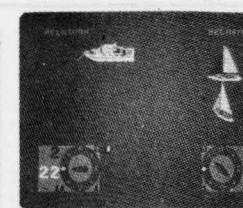
COURSE SCREENS* The actual play is represented by FIVE (5) SCREENS

The Course Screen



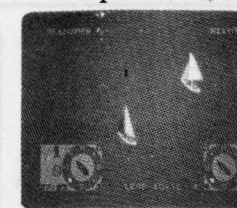
Which from above, identifies the relative position of the yachts on the America's Cup course. During play this screen is automatically called up every minute or so for about 'four (4) seconds', unless some other action interferes. **NOTE:** Pay particular attention to any **CHANGES IN THE WEATHER (WIND SHIFTS)**.

The Start Screen



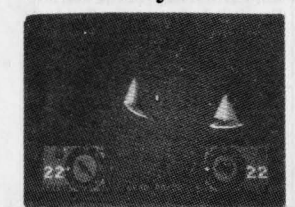
Identifying **PRE-RACE MANOEUVURING** and the **START BOAT**. This screen scrolls to represent the 'RACE' mode with two (2) yachts sailing around the course.

The Split Screen



A. Is automatically created if the yachts are too far apart to appear together on the one screen. The **DEFENDER** is on the **LEFT** and the **CHALLENGER** is on the **RIGHT**. B. Each yacht can call up a 'mini-course' screen to identify his relative position by pressing the fire button with the joystick centred in 'HELMSMAN'S' mode.

The Buoy Screen



Represents a close view of either or both yachts rounding any 'MARKER-BUOY'. This represents a critical phase of tactical activity with sail changing usually required. This screen takes precedence over all others when a yacht is closely adjacent to any buoy.

The current race may be aborted at any time by pressing the **RETURN** key. This will take you to the **RACE RESULTS** screen.

During Play



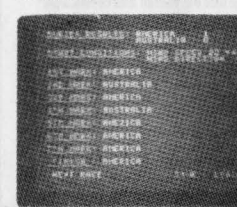
Wind Speed, Boat Speed, Yacht Direction, Current Leg of Race, Elapsed Time, Wind Direction, Buoy Direction

You will have on-screen assistance from: a) a **MARKER ARROW** identifying the **DIRECTION OF THE NEXT MARKER-BUOY** you are heading for. b) **EACH PLAYER** has a dial identifying his: - wind speed and direction - boat speed and direction - elapsed time for the race - current leg of the race.

c) **'MESSAGES'** appear on the screen identifying changes in conditions or sails related to the current race. Concentration is critical, particularly in identifying 'wind shifts', or tactical moves by your opponent. You have the same information to make tactical decisions that 12 metre yachtsmen do, so good sailing.

Remember, the **ARMCHAIR GUIDE TO THE AMERICA'S CUP** provides most of the information you need to be a successful skipper. The **'SINGLE PLAYER'** mode allows you to practice and develop skill.

Race Results



After each race is over, the **'RACE RESULTS'** will appear.

Using the joystick in an **'UP/DOWN MOTION'** you select your choice, then press the fire button to get:

1. **RACE RESULTS** - full results of the last game in the series and the series status. You then decide either 2 or 3.
2. **NEXT RACE** - starts the next race in this series.
3. **NEW SERIES** - clears out the old series and starts a new series.

If no action is taken after loading of the game or after selecting 2 or 3, a **'DEMONSTRATION'** mode will commence and continue until the **'SPACE BAR'** is pressed. (Defaulting to **'DEMONSTRATION'** mode will mean the starting of a new series.)

*Pictures are taken from the Commodore 64 version

Yachting Rules

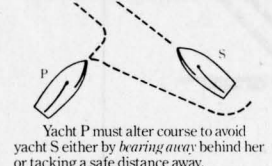
THE following Rules are an abridged version from the International Yacht Racing Union 'Blue Book' which the 12 metres race under.

During the America's Cup Computer game any infringement of these rules will be deemed a 'Foul' by either the Challenger or Defender and the nature of the 'Foul' and the yacht penalised will be indicated on the screen.

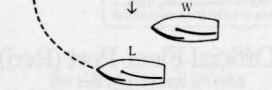
The penalty for a 'Foul' will be 4 boat lengths. Any Foul during starting manoeuvres and prior to the actual start will be paid after crossing the start line.

1. A **Port-Tack** yacht shall keep clear of a **Starboard-Tack** yacht (Rule 36)
2a. A **Windward** yacht shall keep clear of a **Leeward** yacht (Rule 37.1)

1. PORT AND STARBOARD

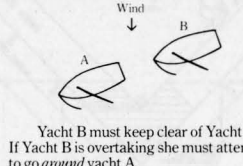


2a. **WINDWARD & LEeward**



2b. Yacht L may *luff*, alter course to windward, as sharply as she pleases to stop W from overtaking.

3. CLEAR ASTERN, CLEAR AHEAD



6. **ROOM TO ROUND MARKS AND OBSTRUCTIONS**



Yacht A is overlapping Yacht B. Yacht B must give A room to round.

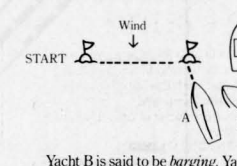
9. A yacht that touches a mark/buoy must complete the rounding, then *re-round the mark without touching it*, keeping clear of other yacht.

10. A premature starter must return to the pre-race side of the line and start again. While returning she must keep clear of other yacht.

11. A yacht that is racing shall keep clear of a yacht recovering a man-overboard.

12. Right of way yacht does not have to hit the other yacht to win a protest. If he has to avoid a collision the other yacht is wrong. No attempt to avoid a collision will result in the right of way yacht and the infringer being penalised.

7. BARGING AT THE START



Yacht B is said to be barging Yacht A. Yacht A can maintain a close hauled cover and exclude yacht B who is not entitled to room at a starting mark.



LOADING INSTRUCTIONS

CBM 64/128 DISK. **LOAD** """,8,1 and press **RETURN**. Game will load automatically.
CASSETTE. Press **SHIFT** and **RUN/STOP** keys together. Press **PLAY** on the cassette recorder.
AMSTRAD DISK. Type **RUN "AE"** and press **RETURN**.
CASSETTE. Press **CTRL** and **SMALL ENTER**, then press **PLAY** on the cassette recorder.

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